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### In the Claims:

1. (Original) A computerized method of determining parameters for chemical synthesis comprising:

accepting a user identification of a target chemical; and

displaying a listing of reagent chemicals that are used to synthesize the target chemical, a listing of equipment that is used to synthesize the target chemical and a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to the user identification of the target chemical.

2. (Original) A method according to Claim 1 further comprising:

accepting user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

electronically ordering the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

3. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical is preceded by:

entering into a database, a plurality of target chemicals, a plurality of corresponding listings of reagent chemicals that are used to synthesize the plurality of target chemicals, a plurality of corresponding listings of equipment that is used to synthesize the plurality of target chemicals and a plurality of corresponding listings of procedures that are used to synthesize the plurality of target chemicals by reacting the corresponding reagent chemicals in the corresponding equipment according to the corresponding procedure.



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4. (Original) A method according to Claim 3 further comprising:

accepting user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

electronically ordering the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

- 5. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises accepting a user identification of a target chemical by chemical formula, chemical structure, chemical compound name and/or CAS number.
- 6. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:

displaying a listing of target chemicals that match the user query; and accepting a user selection of a target chemical from the listing of target chemicals that match the user query.

7. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:

accepting a user identification of a reaction type;

displaying a listing of target chemicals that are synthesized using the reaction type; and

accepting a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type.



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8. (Original) A method according to Claim 1 wherein the following is performed between the accepting and the displaying:

displaying a listing of procedures that can be used to synthesize the target chemical; and

accepting a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical.

9. (Original) A method according to Claim 1 wherein the following is performed between the accepting and the displaying:

accepting a user selection of a desired quantity of the target chemical; and scaling the listing of the reagent chemicals so as to synthesize the desired quantity of the target chemical; and

wherein the displaying comprises:

displaying a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, a listing of equipment that is used to synthesize the desired quantity of the target chemical and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

10. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:

displaying a prioritized listing of target chemicals that match the user query; and accepting a user selection of a target chemical from the prioritized listing of target chemicals that match the user query.

11. (Original) A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:

accepting user identification of a chemical;

displaying a listing of procedures that use the chemical as a reagent chemical; and accepting a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical.



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### 12-17. (Canceled)

18. (Original) A computerized method of obtaining materials for chemical synthesis comprising:

electronically ordering a target chemical, reagent chemicals that are used to synthesize the target chemical and/or equipment that is used to synthesize the target chemical, from an electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, of the equipment that is used to synthesize the target chemical and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

19. (Original) A method according to Claim 18 wherein the electronically ordering comprises:

electronically ordering a kit of the reagent chemicals that are used to synthesize the target chemical.

20. (Original) A method according to Claim 18 wherein the electronically ordering comprises:

electronically ordering a kit of the equipment that is used to synthesize the target chemical.

## 21-23. (Canceled)

24. (Original) A system for determining parameters for chemical synthesis comprising:

means for accepting a user identification of a target chemical; and
means for displaying a listing of reagent chemicals that are used to synthesize the
target chemical, a listing of equipment that is used to synthesize the target chemical and a
listing of a procedure that is used to synthesize the target chemical by reacting the reagent

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chemicals in the equipment according to the procedure, in response to the user identification of the target chemical.

## 25. (Original) A system according to Claim 24 further comprising:

means for accepting user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

means for electronically ordering the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

# 26. (Original) A system according to Claim 24 further comprising: a database; and

means for entering into the database, a plurality of target chemicals, a plurality of corresponding listings of reagent chemicals that are used to synthesize the plurality of target chemicals, a plurality of corresponding listings of equipment that is used to synthesize the plurality of target chemicals and a plurality of corresponding listings of procedures that are used to synthesize the plurality of target chemicals by reacting the corresponding reagent chemicals in the corresponding equipment according to the corresponding procedure.

## 27. (Original) A system according to Claim 26 further comprising:

means for accepting user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

means for electronically ordering the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

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28. (Original) A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises means for accepting a user identification of a target chemical by chemical formula, chemical structure, chemical compound name and/or CAS number.

29. (Original) A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:

means for displaying a listing of target chemicals that match the user query; and means for accepting a user selection of a target chemical from the listing of target chemicals that match the user query.

30. (Original) A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:

means for accepting a user identification of a reaction type;

means for displaying a listing of target chemicals that are synthesized using the reaction type; and

means for accepting a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type.

31. (Original) A system according to Claim 24 further comprising:
means for displaying a listing of procedures that can be used to synthesize the target chemical; and

means for accepting a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical.

32. (Original) A system according to Claim 24 further comprising:
means for accepting a user selection of a desired quantity of the target chemical; and
means for scaling the listing of the reagent chemicals so as to synthesize the desired
quantity of the target chemical; and

wherein the means for displaying comprises:

means for displaying a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, a listing of equipment that is used to



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synthesize the desired quantity of the target chemical and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

33. (Original) A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:

means for displaying a prioritized listing of target chemicals that match the user query; and

means for accepting a user selection of a target chemical from the prioritized listing of target chemicals that match the user query.

34. (Original) A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:

means for accepting user identification of a chemical;

means for displaying a listing of procedures that use the chemical as a reagent chemical; and

means for accepting a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical.

35-40. (Canceled)

41. (Original) A system for obtaining materials for chemical synthesis comprising:

an electronically displayed listing of reagent chemicals that are used to synthesize a target chemical, of equipment that is used to synthesize the target chemical and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure; and

means for electronically ordering the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, from the electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, of the equipment that is used to synthesize the target



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chemical and of the procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

42. (Original) A system according to Claim 41 wherein the means for electronically ordering comprises:

means for electronically ordering a kit of the reagent chemicals that are used to synthesize the target chemical.

43. (Original) A system according to Claim 41 wherein the means for electronically ordering comprises:

means for electronically ordering a kit of the equipment that is used to synthesize the target chemical.

44. (Original) A computer program product that determines parameters for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to accept a user identification of a target chemical; and

computer-readable program code that is configured to display a listing of reagent chemicals that are used to synthesize the target chemical, a listing of equipment that is used to synthesize the target chemical and a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to the user identification of the target chemical.

45. (Original) A computer program product according to Claim 44 further comprising:

computer-readable program code that is configured to accept user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and



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computer-readable program code that is configured to electronically order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

46. (Original) A computer program product according to Claim 44 further comprising:

computer-readable program code that is configured to enter into a database, a plurality of target chemicals, a plurality of corresponding listings of reagent chemicals that are used to synthesize the plurality of target chemicals, a plurality of corresponding listings of equipment that is used to synthesize the plurality of target chemicals and a plurality of corresponding listings of procedures that are used to synthesize the plurality of target chemicals by reacting the corresponding reagent chemicals in the corresponding equipment according to the corresponding procedure.

47. (Original) A computer program product according to Claim 46 further comprising:

computer-readable program code that is configured to accept user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

computer-readable program code that is configured to electronically order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

48. (Original) A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises computer-readable program code that is configured to accept a user identification of a target chemical by chemical formula, chemical structure, chemical compound name and/or CAS number.

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49. (Original) A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:

computer-readable program code that is configured to display a listing of target chemicals that match the user query; and

computer-readable program code that is configured to accept a user selection of a target chemical from the listing of target chemicals that match the user query.

50. (Original) A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:

computer-readable program code that is configured to accept a user identification of a reaction type;

computer-readable program code that is configured to display a listing of target chemicals that are synthesized using the reaction type; and

computer-readable program code that is configured to accept a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type.

51. (Original) A computer program product according to Claim 44 further comprising:

computer-readable program code that is configured to display a listing of procedures that can be used to synthesize the target chemical; and

computer-readable program code that is configured to accept a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical.

52. (Original) A computer program product according to Claim 44 further comprising:

computer-readable program code that is configured to accept a user selection of a desired quantity of the target chemical; and

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computer-readable program code that is configured to scale the listing of the reagent chemicals so as to synthesize the desired quantity of the target chemical; and

wherein the computer-readable program code that is configured to display comprises: computer-readable program code that is configured to display a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, a listing of equipment that is used to synthesize the desired quantity of the target chemical and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

53. (Original) A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:

computer-readable program code that is configured to display a prioritized listing of target chemicals that match the user query; and

computer-readable program code that is configured to accept a user selection of a target chemical from the prioritized listing of target chemicals that match the user query.

54. (Original) A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:

computer-readable program code that is configured to accept user identification of a chemical:

computer-readable program code that is configured to display a listing of procedures that use the chemical as a reagent chemical; and

computer-readable program code that is configured to accept a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical.

55-60. (Canceled)



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61. (Original) A computer program product that obtains materials for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to electronically order a target chemical, reagent chemicals that are used to synthesize the target chemical and/or equipment that is used to synthesize the target chemical, from an electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, of the equipment that is used to synthesize the target chemical and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals in the equipment according to the procedure, in response to user input to order the target chemical, the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

62. (Original) A computer program product according to Claim 61 wherein the computer-readable program code that is configured to electronically order comprises: computer-readable program code that is configured to electronically order a kit of the reagent chemicals that are used to synthesize the target chemical.

63. (Original) A computer program product according to Claim 61 wherein the computer-readable program code that is configured to electronically order comprises:

computer-readable program code that is configured to electronically order a kit of the equipment that is used to synthesize the target chemical.

